

any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

***Amendments***

***In the Claims:***

Please amend the claims as follows:

Please cancel claims 34, 37, and 126 without prejudice to or disclaimer of the subject matter contained therein. Applicants reserve the right to prosecute the subject matter of these claims in one or more continuing applications.

Claims 39, 40, 122, and 123 have been reiterated for the Examiner's convenience.

Please substitute the following claim 26 for the currently pending claim 26:

*Sub 12* 26. (Three times amended) A method of producing an ASLV reverse transcriptase having a specific activity of at least about 30,000 units per milligram and having RNase H activity, said method comprising

*E1* (a) obtaining a host cell comprising one or more nucleic acid sequences encoding at least one ASLV reverse transcriptase; and

(b) culturing said host cell under conditions sufficient to produce said ASLV reverse transcriptase; and

(c) thereby obtaining an ASLV reverse transcriptase having a specific activity of at least about 30,000 units per milligram and having RNase H activity.

Please substitute the following claim 28 for the currently pending claim 28:

*E2 Sub 13* 28. (Once amended) The method of claim 26, wherein said ASLV reverse

cont  
E2  
transcriptase comprises one or more subunits selected from the group consisting of one or more  $\alpha$  subunits, one or more  $\beta$  subunits, and one or more  $\beta$ p4 subunits, of one or more ASLV reverse transcriptases, and fragments or mutants thereof having reverse transcriptase activity.

---

Please substitute the following claim 33 for the currently pending claim 33:

E3  
33. (Once amended) The method of claim 26, wherein subunits of said ASLV reverse transcriptase are expressed in said host cell to form said ASLV reverse transcriptase.

---

39. (Reiterated) The method of claim 26, wherein said ASLV reverse transcriptase is an RSV reverse transcriptase.

40. (Reiterated) The method of claim 26, wherein said ASLV reverse transcriptase is an AMV reverse transcriptase.

Please substitute the following claim 117 for the currently pending claim 117:

117. (Once amended) The method of claim 28, wherein said one or more subunits encoded by nucleic acid sequences of one or more ASLV reverse transcriptases are contained in one or more vectors.

[Please substitute the following claim 118 for the currently pending claim 118:]

118. (Once amended) The method of claim 28, wherein said subunits are one or more  $\alpha$  subunits.

[Please substitute the following claim 119 for the currently pending claim 119:]

119. (Once amended) The method of claim 28, wherein said subunits are one or more  $\beta$  subunits.

[Please substitute the following claim 120 for the currently pending claim 120:]

120. (Once amended) The method of claim 28, wherein said subunits are one or more  $\beta p4$  subunits.

[Please substitute the following claim 121 for the currently pending claim 121:]

121. (Once amended) The method of claim 28, wherein said subunits are an  $\alpha$  subunit and a  $\beta$  subunit of one or more ASLV reverse transcriptases.

122. (Reiterated) The method of claim 119, wherein said  $\beta$  subunits form an ASLV reverse transcriptase comprising two  $\beta$  subunits.

123. (Reiterated) The method of claim 121, wherein said  $\alpha$  and  $\beta$  subunits form an ASLV reverse transcriptase comprising an  $\alpha$  and a  $\beta$  subunit.

Please substitute the following claim 124 for the currently pending claim 124:

124. (Once amended) The method of claim 28, wherein said subunits are encoded by one or more nucleotide sequences contained on the same vector.

chg  
E5  
[Please substitute the following claim 125 for the currently pending claim 125:]

125. (Once amended) The method of claim 28, wherein said subunits are encoded by one or more nucleotide sequences contained on different vectors.

Please substitute the following claim 127 for the currently pending claim 127:

del 36  
E6  
127. (Twice amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 30,000 units per milligram to about 150,000 units per milligram.

[Please substitute the following claim 128 for the currently pending claim 128:]

128. (Once amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 35,000 units per milligram to about 150,000 units per milligram.

[Please substitute the following claim 129 for the currently pending claim 129:]

129. (Once amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 40,000 units per milligram to about 150,000 units per milligram.

[Please substitute the following claim 130 for the currently pending claim 130:]

130. (Once amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 45,000 units per milligram to about 150,000 units per milligram.

[Please substitute the following claim 131 for the currently pending claim 131:]

131. (Once amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 50,000 units per milligram to about 150,000 units per milligram.

[Please substitute the following claim 132 for the currently pending claim 132:]

can't  
E6  
132. (Once amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 55,000 units per milligram to about 150,000 units per milligram.

[Please substitute the following claim 133 for the currently pending claim 133:]

but  
96  
can't  
133. (Once amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 60,000 units per milligram to about 150,000 units per milligram.

[Please substitute the following claim 134 for the currently pending claim 134:]

134. (Once amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 65,000 units per milligram to about 150,000 units per milligram.

cn't  $\zeta_6$  [Please substitute the following claim 135 for the currently pending claim 135:]

135. (Once amended) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 70,000 units per milligram to about 150,000 units per milligram.

Please add the following new claims:

$\zeta_7$  136. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 75,000 units per milligram to about 150,000 units per milligram.

137. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity from about 80,000 units per milligram to about 150,000 units per milligram.

Sub  $\zeta_6$  138. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 35,000 units per milligram.

139. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 40,000 units per milligram.

140. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 45,000 units per milligram.

141. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 50,000 units per milligram.

142. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 55,000 units per milligram.

143. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 60,000 units per milligram.

144. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 65,000 units per milligram.

145. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 70,000 units per milligram.

146. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 75,000 units per milligram.

147. (New) The method of claim 26, wherein said ASLV reverse transcriptase has a specific activity of at least about 80,000 units per milligram.

148. (New) The method of claim 26, wherein said ASLV reverse transcriptase comprises one or more subunits selected from the group consisting of one or more  $\alpha$  subunits, one or more  $\beta$  subunits, and one or more  $\beta p4$  subunits, of one or more ASLV reverse transcriptases.

---